A Vision of Library Users'and Qr Codes

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Abstract

The research paper briefly describes the revolutionary invention of QR codes (Quick Response Codes) and how library users use them to access information for various purposes with the help of smart phones. An oral and common sample survey of 170 Library users (150 students and 20 academic staff), 20 librarians from various types of college libraries was conducted to know the implementation and use of QR codes as well as the interests of users.

It was found that 93% of libraries in rural, tribal and urban areas were willing to adopt this new technology to provide information services, but 82% were unable to do so due to lack of funds, 75% due to technical reasons, 89% meager staff and technical skill, and 68% due to the attitude of authorities. It was also observed that 96% of students (boys 92%, girls 98%) and 35% academic aspirants (young 32% and senior 6%) were interested in this new technology.

It was concluded and recommended that 66% of the total users are interested in this new technology for faster service and saving their time and 93% of the librarians are interested in adopting this technology. QR code technology is very interesting and easy to access information and it requires technically skilled and competent personnel and adequate financial and official support.

Keywords:
QR Codes, Smartphone, Library, Library staff, ICT based Library services, Users.

Introduction

Information is the key to success. Information services are keys to the development of education, research, and extension education in India. In the changing scenario, the role of libraries has changed and now, libraries are also considered as 'Knowledge Resource Centre' and 'Information Centre'. Currently, libraries are using Information Communication Technology (ICT) for library automation and providing various types of online information services to users and this has been proven during the Covid-19 period. One such recent tool being adapted in the library environment is QR codes through mobile devices to save the time of users.

Libraries are also forced to adopt smart phone based library services. QR Codes are the handy and easy solution to bring smart phone based library services. A general survey was conducted in some college libraries considering the use and interest of users of QR codes in libraries and also reviewed the necessary literature to support the study.

2. Contactless Revolutionary Invention: The QR Code

The QR code system was invented in 1994 by **Masahiro Hara** from the Japanese company Denso Wave, a technology that since its development has become an integral part of society. The initial design was influenced by the black and white pieces on a Go board.

Even without realizing it we use QR codes every day now at the grocery store, at airports, at security checkpoints and so on. Even behind the scenes, QR code reading has been a revolutionary technology in manufacturing and supply chains across different industries.

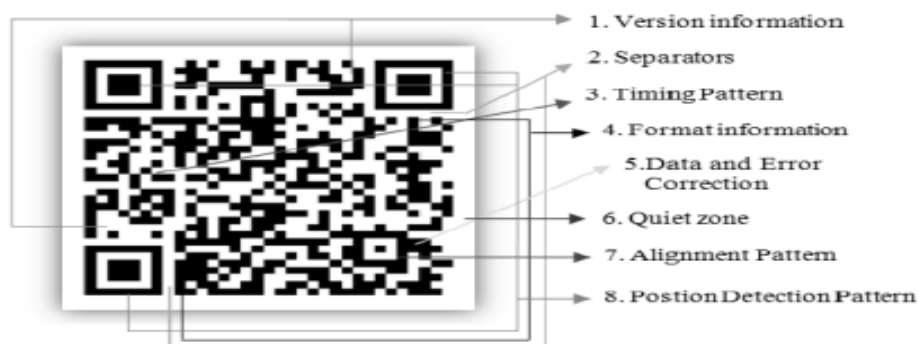**Masahiro Hara**
Father of QR Code

2.1 Design of QR Code

Fig:2.1.1 Jumana Waleed, Sarah Saadoon & oth.(2015)[4]

The basic objective behind the development of QR Code is encoding and decoding with high speed and accessible it from any direction or any position detection process which can easily scan by the users.

3. Interest of QR Code

It's fast, store huge amount of data, use anywhere, no specific skill is required, no additional technology is required, use the information later, anyone can generate it, and increased customer satisfaction

4. Review of Literature

Dani A., & Patil, R (2020)[2] discussed about the current library management system and how it processed it in to develop smart library management system using QR code. This study mainly focuses on the importance of QR Code based library management system which are efficient and reliable for Librarian, staff and students, also works in real time, easy access, reduces the bourdon on the librarian as it will help to track the books available and issued person for any book and total number of books along with ageing analysis. The author also highlighted the concept of python Qt5 frame work application, how it is being used for College Library database which can be accessed through out the institution.

Das Indrakshi., & Das Digbijoy (2021)[3] The main objective of this paper is to amend the basic concept of QR Code, their structure, advantageous nature and its activities. This research paper mainly focuses on the effectiveness of QR Code & its applications on library services in the present scenario also

has discussed other services in which people are dependent during covid-19 pandemic and how it placed as a position of successful tool in this technical age.

Walsh A. (2009)[7] has discussed as "QR codes can be used to encode various sorts of data when used for mobiles, most typically text; uniform resource locators (URLs); phone numbers (prompting your phone to call the number); text message and number (prompting your phone to text the number); and contact details (vcard). The QR readers most reliably work with the text and URL options, particularly as some of the providers of the software also provide hosting services. In hosted solutions, QR codes generated through their software link to a re-direction link on their site, providing data on traffic from a particular code to their customers"

Tapas K. Dasa , Kumbarb T. S. & Ramswaroop A.(2020)[6] has studied the Use of QR code in IIT Gandhinagar library and was found that it has been one of the early users of this technology for promoting its services amongst its user community. It has adopted and demonstrated the benefits of this technology by applying it to over dozen areas of library services. Because of its ease of use and speed, it has been observed that during last two-three years, acceptance and use of this technology among current generation of students has gone up for retrieving and downloading information. In fact, more number of students have been asking for applying QR in other areas of library services.

5. Scope of the study

An oral common and sample survey of 170 Library users (150 students and 20 academic staff), 20 librarians from various college libraries (Arts, Science, Commerce, Law, Engineering, Agriculture, Medical, Social Welfare and education) in rural, tribal and urban areas of Maharashtra was conducted to know the implementation and use of QR codes as well as the interests of users.

6. Objectives

➢ To know the nature and role of QR Code
➢ To find out the implementation of QR codes in the libraries for better services
➢ To verify the interest of users for seeking information through QR Code

7. Role of QR Code and Library Services

QR code represents information about an item to which it is attached that can be read using specific software installed on smartphone or any other handheld device., User Friendly, Personalized service, Ability to access Information, Time Savings, User Participation, Location awareness, Limitless access.

7.1 Desire of Librarians to Implement of QR Code in Library Services

Opinion of Librarians

Table: 7.1.1 Willing to adopt QR Code Related Services in Libraries

Libraries	Area of using QR Code in libraries- opinion of Librarians and their interest for implementation	Response %
A	Implementation of QR Codes in Library resource and service awareness activities, Periodicals, Rare books collection, CD/DVDs list, Notification, Exam results, New Arrival list, Audio/Visual collection, book indent form, contact details, etc. promote library service. Text messages	92 %

B	Library OPAC, Location finding, Audio/Visual collection, Staff contact information, Pathfinder, Section location, emails, Library URL, contact details, product information, etc, e-resources list, books of the week		90%
C	Library website URL,Guide, Events information, different URLs, dept. information, Audio/Visual collection, bibliography, Exhibitions of resources or materials, Library stacks, near journals to point to online holdings, Catalogues & bibliographic records, Contact information etc.		96%
		Total %	93%

Source: Data collected orally from libraries.

➢ **Libraries interested to adopt**
   QR Code based Library Services ➡ **93%**

Fig. 7.1
7.1.1 Observations
It was found that 93% of various types of libraries in rural, tribal and urban areas were willing to adopt this new technology to provide information services. The different types of services recorded in the table 7.1.1.
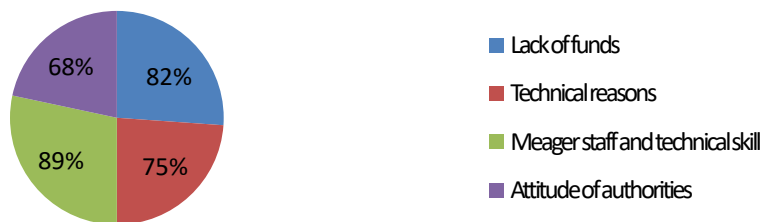
8. Difficulties of Librarians to adopt New Technology

Table: 8.1. Problems of Librarians to adopt New Technology

Difficulties	Libraries Nos	Response	Percentage
Lack of funds	20	18	82%
Technical reasons	20	15	75%
Meager staff and technical skill	20	17	89%
Attitude of authorities	20	13	68%

Source: Data collected orally from libraries

Difficulties of Librarians

Fig. 8.1
8.1.1 Observations
It was found that 82% were unable to adopt new technology and implement QR code services due to lack of funds, 74% due to technical reasons, 89% meager staff and technical skill, and 68% due to the attitude of authorities.
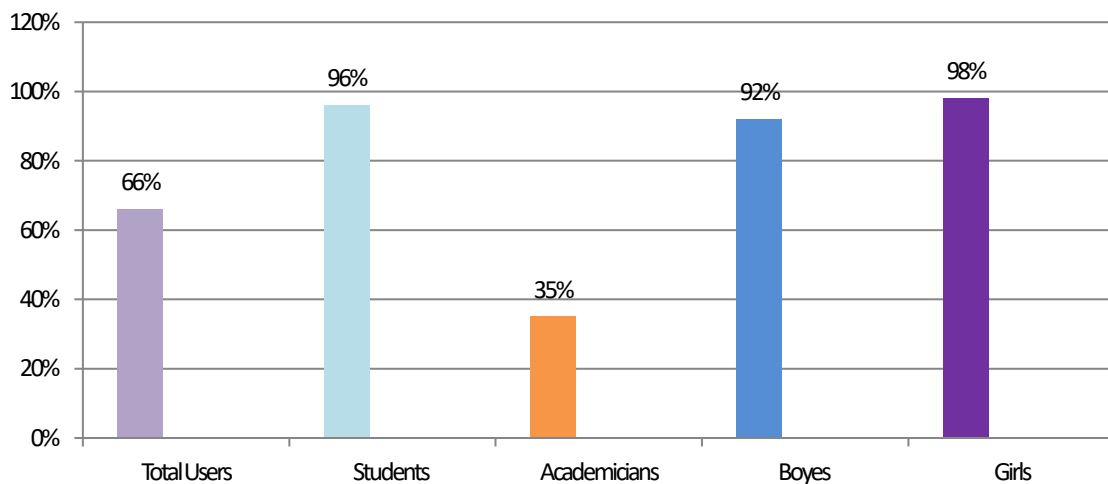
9. Interest of Library Users

Table: 9.1 Interest of users to access information by QR Code technology

Users interest to access information	Total Users	Response	Percentage	
➤ **Students**	150	145	96	%
➤ **Academic staff**	020	007	35	%
Full text databases, Bibliographic databases, E-books, News clipping Services, E- Text book, E-Thesis, Old Question Paper & study material, Library handbook, Library Catalogue, Scan to mail, Event QR Code, Twitter, Social Blog, Library Tour, SMS Reference, Mobile number, Web Opac, Video Library, Book Contents, Author's profile, Book Poll, Call out, Library Guides, Library Exhibition, Building update, Study Room Reservation, Library collection, Journal Website Link, Print Journal/ article, Shelf Ends, i- help				
Total response	170	152	66	%

Source: Data collected orally

9.1 Interest of users to access information by QR Code technology

Fig. 9.1

9.1,1 Observation

It was found that a total of 66% of library users were willing to access information through QR codes out of which 96% were students (boys 92%, girls 98%) and 35% were academicians (young 32% and seniors 6%).

10. Conclusion

It was found that 93% of libraries in rural, tribal and urban areas were willing to adopt this new technology to provide information services, but 82% were unable to do so due to lack of funds, 75% due to technical reasons, 89% meager staff and technical skill, and 68% due to the attitude of authorities. It was also observed that 96% of students (boys 92%, girls 98%) and 35% academic aspirants (young 32% and senior 6%) were interested in this new technology.

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